

ELECTRICAL CAPACITANCE SAPPHIRE DIAPHRAGM PRESSURE  
SENSOR AND A METHOD OF FABRICATING THE SAME

ABSTRACT OF THE DISCLOSURE

There is provided a highly accurate electrical  
5 capacitance diaphragm pressure sensor capable of reducing  
temperature drift that arises when a pressure-travel  
coefficient changes with temperature variations of a fluid  
whose pressure is sensed. A sapphire diaphragm pressure  
sensor, in which sapphire diaphragms are arranged in  
10 opposing relation, comprises a pressure sensing element (10,  
30) having a pressure receiving part (10A, 30A) with a  
deposition electrode formed on each of the opposing faces  
of sapphire diaphragms which are provided in opposing  
relation to each other and a securing part with a metal  
15 deposited on a part of each of the surfaces of the sapphire  
diaphragms, and further comprises a metal base (11, 31) for  
securing the pressure sensing element at the securing part  
of the pressure sensing element, a conductive sealing agent  
(13, 33) for sealing a gap between the securing part on  
20 which a metal is deposited and said metal base, and a  
nickel protective layer (14, 34) for protecting at least  
said conductive sealing agent from a medium whose pressure  
is to be measured.